Please substitute the following paragraph for the paragraph starting at page 23, line 3 and ending at line 11.

(4-2-4) a stop is provided near the entrance surface of said optical system and the relation set forth in Equation 5 below is satisfied;

IN THE CLAIMS

Please cancel Claims 1 through 6, 9 through 12, 14, 20 through 22, 24, 27, and 44 without prejudice to or disclaimer of the subject matter recited therein. Please add Claims 69 through 90 as follows:

--69. (New) An optical system comprising:

a first optical component for forming an intermediate image of an object;

a second optical component for forming a final image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein said first optical component is configured such that a spot size near the intermediate image is two or more times a size of a noise source near the intermediate image when an aperture of said aperture stop is minimized.

70. (New) An optical system according to Claim 69, wherein the size of the noise source is greater than or equal to $5b/|\beta 11|$, where b is an minimum resolution on the final image plane and $\beta 11$ is an image magnification of said second optical component.

71. (New) An optical system according to Claim 69, wherein the following condition is satisfied:

$$V/|\beta 11| < U$$

where V is a spot size on the final image plane, β11 is an image magnification of said second optical component, and U is a spot size on the intermediate image position.

72. (New) An image pickup apparatus comprising:

an optical system according to Claim 69; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

73. (New) An optical system comprising:

a first optical component for forming an intermediate image of an object;

a second optical component for forming a final image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein said first optical component is configured such that a spot size near the intermediate image is three or more times a size of a noise source near the intermediate image when an aperture of said aperture stop is maximized.

74. (New) An optical system according to Claim 73, wherein the size of the noise source is greater than or equal to $5b/|\beta 11|$, where b is a minimum resolution on the final image plane and $\beta 11$ is an image magnification of said second optical component.

C9 Cont'd

75. (New) An optical system according to Claim 73, wherein the following relation is satisfied:

$$V/|\beta 11| < U$$

D1 cont'd

where V is a spot size on the final image plane, $\beta 11$ is an image magnification of said second optical component, and U is a spot size on the intermediate image position.

76. (New) An image pickup apparatus comprising:

an optical system according to Claim 73; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

77. (New) An optical system comprising:

an optical element having a first optical component for forming an intermediate image of an object and a second optical component for forming again an object image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein said first optical component is

configured such that a size of a spot near the intermediate image is two or more times a size of a noise source near the intermediate image when an aperture of said aperture stop is minimized.

78. (New) An optical system according to Claim 77, wherein said optical element is a transparent body having two refractive surfaces and a plurality of reflective surfaces, and

wherein said two refractive surfaces and said plurality of reflective surfaces of said optical element are grouped into said first optical component and said second optical component in accordance with positions thereof with respect to the position of the intermediate image.

79. (New) An image pickup apparatus comprising:

an optical system according to Claim 77; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

80. (New) An optical system comprising:

an optical element having a first optical component for forming an intermediate image of an object and a second optical component for forming again an object image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein said first optical component is configured such that a size of a spot near the intermediate image is three or more times a size of a noise source near the intermediate image when an aperture of said aperture stop is maximized.

C9 Cont'd

81. (New) An optical system according to Claim 80, wherein said optical element is a transparent body having two refractive surfaces and a plurality of reflective surfaces, and

D1 cont'd

wherein said two refractive surfaces and said plurality of reflective surfaces are grouped into said first optical component and said second optical component in accordance with positions thereof with respect to the position of the intermediate image.

82. (New) An image pickup apparatus comprising:

an optical system according to Claim 80; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

83. (New) An optical system comprising:

a first optical component for forming an intermediate image of an object;

a second optical component for forming a final image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein the following relation is satisfied:

$$\left|\frac{D \cdot f1}{S \cdot AR1}\right| < 0.1$$

where D is a size of a noise source near the intermediate image, f1 is a maximum focal length of said first optical component out of those dependent upon azimuths, an azimuth at the maximum focal length of said first optical component being defined as $\xi$, S is an on-axis astigmatic difference at the intermediate image position, and AR1 is a diameter of an exit pupil by said first optical component in correspondence to the azimuth $\xi$, at the time an aperture of said aperture stop is maximized.

84. (New) An image pickup apparatus comprising:

an optical system according to Claim 83; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

85. (New) An optical system comprising:

a first optical component for forming an intermediate image of an object;

a second optical component for forming a final image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein the following relation is satisfied:

$$\left|\frac{D \cdot f1}{S \cdot AR2}\right| < 0.3$$

where D is a size of a noise source near the intermediate image, f1 is a maximum focal length of said first optical component out of those dependent upon azimuths, an azimuth at the maximum focal length of said first optical component being defined as $\xi$, S is an on-axis astigmatic difference at the intermediate image position, and AR2 is a diameter of an exit pupil by said first optical component in correspondence to the azimuth $\xi$, at the time an aperture of said aperture stop is minimized.

86. (New) An image pickup apparatus comprising:

an optical system according to Claim 85; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

87. (New) An optical system comprising:

a first optical component for forming an intermediate image of an object;

a second optical component for forming a final image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein the following relation is satisfied:

$$\left| \frac{5b \cdot f1}{|\beta| \cdot S \cdot AR1} \right| < 0.1$$

where b is a minimum resolution on the final image plane, f1 is a maximum focal length of said first optical component out of those dependent upon azimuths, an azimuth at the maximum focal length of said first optical component being defined as $\xi$, S is an on-axis astigmatic difference at the intermediate image position, $\beta$ is an image magnification of said second optical component, in a direction normal to the azimuth $\xi$, and AR1 is a diameter of an exit pupil by said first optical component in correspondence to the azimuth $\xi$ at the time an aperture of said aperture stop is maximized.

88. (New) An image pickup apparatus comprising:

an optical system according to Claim 87; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.

89. (New) An optical system comprising:

a first optical component for forming an intermediate image of an object;

a second optical component for forming a final image with light from the intermediate image; and

an aperture stop,

wherein at least one of said first optical component and said second optical component comprises an off-axial curved surface, and wherein the following relation is satisfied:

$$\left| \frac{5b \cdot f1}{|\beta| \cdot S \cdot AR2} \right| < 0.3$$

where b is a minimum resolution on the final image plane, f1 is a maximum focal length of said first optical component out of those dependent upon azimuths, an azimuth at the maximum focal length of said first optical component being defined as $\xi$, S is an on-axis astigmatic difference at the intermediate image position, $\beta$ is an image magnification of said second optical component, in a direction normal to the azimuth $\xi$, and AR2 is a diameter of an exit pupil by said first optical component in correspondence to the azimuth $\xi$ at the time an aperture of said aperture stop is minimized.

90. (New) An image pickup apparatus comprising:

an optical system according to Claim 89; and

an image pickup device,

wherein the final image is formed on a light receiving surface of said image pickup device by said optical system.--